Contents

(Figures in bold type denote number of issue)

ARTICLES

ALSOP, G. I. & HOLDSWORTH, R. E.
The distribution, geometry and kinematic significance of Caledonian buckle folds in the western Moine Nappe, northwestern Scotland, **3**, 353

ALSOP, G. I. & HUTTON, D. H. W.
Major southeast-directed Caledonian thrusting and folding in the Dalradian rocks of mid-Ulster: implications for the Caledonian tectonics and mid-crustal shear zones, **2**, 233

AZZARO, E., BELLANCA, A. & NERI, R.
Mineralogy and geochemistry of Mesozoic black shales and interbedded carbonates, southeastern Sicily: evaluation of diagenetic processes, **2**, 191

BELL, C. M. & SUAREZ, M.
The depositional environments and tectonic development of a Mesozoic intra-arc basin, Atacama Region, Chile, **4**, 417

BENNETT, M. R. & BOULTON, G. S.
A reinterpretation of Scottish 'hummocky moraine' and its significance for the deglaciation of the Scottish Highlands during the Younger Dryas or Loch Lomond Stadial, **3**, 301

BHATTACHARYA, S., SEN, S. K. & ACHARYYA, A.
Structural evidence supporting a remnant origin of patchy charnockites in the Chilka Lake area, India, **3**, 363

BLUNDELL, D. J.
Deep structure of the Anglo-Brabant Massif revealed by seismic profiling, **5**, 563

BUSBY, J. P., KIMBELL, G. S. & PHARAOH, T. C.
Integrated geophysical/geological modelling of the Caledonian and Precambrian basement of southern Britain, **5**, 593

CAI CHONG-YANG, DOU YA-WEI & EDWARDS, D.
New observations on a Pridoli plant assemblage from north Xinjiang, northwest China, with comments on its evolutionary and palaeogeographical significance, **2**, 155

CHACKSFIELD, B. C., DE VOS, W., D'HOOGE, L., DUSAR, M., LEE, M. K., POITEVIN, C., ROYLES, C. P. & VERNIERS, J.
A new look at Belgian aeromagnetic and gravity data through image-based display and integrated modelling techniques, **5**, 583

COOPER, A. H., MILLWARD, D., JOHNSON, E. W. & SOPER, N. J.
The early Palaeozoic evolution of northwest England, **5**, 711

COPE, J. C. W. & BEVINS, R. E.
The stratigraphy and setting of the Precambrian rocks of the Llangynog Inlier, Dyfed, South Wales, **1**, 101

COX, S. C.
Inter-related plutonism and deformation in South Victoria Land, Antarctica, **1**, 1

D'LEMOS, R. S. & BROWN, M.
Sm–Nd isotope characteristics of late Caledonian granite magmatism in northern France and the Channel Islands, **6**, 797

DE VOS, W., VERNIERS, J., HERBOSCH, A. & VANGUESTAINE, M.
A new geological map of the Brabant Massif, Belgium, **5**, 605

DOUBLEDAY, P. A., MACDONALD, D. I. M. & NELL, P. A. R.
Sedimentology and structure of the trench-slope to forearc basin transition in the Mesozoic of Alexander Island, Antarctica, **6**, 737

DRURY, S. A. & BERHE, S. M.
Accretion tectonics in northern Eritrea revealed by remotely sensed imagery, **2**, 177

ELORZA, J. & GARCIA-GARMILLA, F.
Chert appearance in the Cueva–Bedón carbonate platform (upper Cretaceous, northern Spain), **6**, 805

FLOYD, P. A., HOLDSWORTH, R. E. & STEELE, S. A.
Geochemistry of the Start Complex greenschists: Rhenohercynian MORB?, **3**, 345

FORTEY, N. J., ROBERTS, B. & HIRONS, S. R.
Relationship between metamorphism and structure in the Skiddaw Group, English Lake District, **5**, 631

GREILING, R. O., GAYER, R. A. & STEPHENS, M. B.
A basement culmination in the Scandinavian Caledonides formed by antiformal stacking (Bångonåive, northern Sweden), **4**, 471

HAREMO, P., ANDRESEN, A. & DYPVIK, H.
Mesozoic extension versus Tertiary compression along the Billefjorden Fault Zone south of Isfjorden, central Spitsbergen, **6**, 783

HARRIS, C. & GRANTHAM, G. H.
Geology and petrogenesis of the Straumsvola nepheline syenite complex, Dronning Maud Land, Antarctica, **4**, 513

HUFF, W. D., MERRIMAN, R. J., MORGAN, D. J. & ROBERTS, B.
Distribution and tectonic setting of Ordovician K-bentonites in the United Kingdom, **1**, 93

HUGHES, R. A., COOPER, A. H. & STONE, P.
Structural evolution of the Skiddaw Group (English Lake District) on the northern margin of eastern Avalonia, **5**, 621

HUGHES, R. A. & KOKELAAR, P.
The timing of Ordovician magmatism in the English Lake District and Cross Fell inliers, **3**, 369

KATZUNG, G., GIESE, U., WALTER, R. & VON WINTERFELD, C.
The Rügen Caledonides, northeast Germany, **5**, 725

KEELEY, M. L., LEWIS, C. L. E., SEVASTOPULO, G. D., CLAYTON, G. & BLACKMORE, R.
Apatite fission track data from southeast Ireland: implications for post-Variscan burial history, **2**, 171

KENNEDY, W. J. & COBBAN, W. A.
Maastrichtian ammonites from the Corsicana Formation in northeast Texas, **1**, 57

KEY, R. M., PHILLIPS, E. R. & CHACKSFIELD, B. C.
Emplacement and thermal metamorphism associated with the post-orogenic Strath Ossian Pluton, Grampian Highlands, Scotland, **3**, 379

KHOMENTOVSKY, V. V. & KARLOVA, G. A.
Biostratigraphy of the Vendian–Cambrian beds and the lower Cambrian boundary in Siberia, **1**, 29

KNELLER, B. C. & BELL, A. M.
An Acadian mountain front in the English Lake District: the Westmorland Monocline, **2**, 203

KNELLER, B. C., KING, L. M. & BELL, A. M.
Foreland basin development and tectonics on the northwest margin of eastern Avalonia, **5**, 691

KUTSUKAKE, T.
An initial continental margin plutonism – Cretaceous Older Ryoke granitoids, southwest Japan, **1**, 15

LEE, M. K., PHARAOH, T. C., WILLIAMSON, J. P., GREEN, C. A. & DE VOS, W.
Evidence on the deep structure of the Anglo-Brabant Massif from gravity and magnetic data, **5**, 575

LIÑÁN, E., PEREJÓN, A. & SDZUY, K.
The Lower–Middle Cambrian stages and stratotypes from the Iberian Peninsula: a revision, **6**, 817

LÖFGREN, A.
Conodonts from the lower Ordovician at Hunneberg, south-central Sweden, **2**, 215

LUQUE, F. J., BARRENECHEA, J. F. & RODAS, M.
Graphite geothermometry in low and high temperature regimes: two case studies, **4**, 501

MCKIE, T.
Relative sea-level changes and the development of a Cambrian transgression, **2**, 245

MERRIMAN, R. J., PHARAOH, T. C., WOODCOCK, N. H. & DALY, P.
The metamorphic history of the concealed Caledonides of eastern England and their foreland, **5**, 613; erratum, **6**, 865

MILNER, S. C., LE ROEX, A. P. & WATKINS, R. T.
Rb–Sr age determinations of rocks from the Okenyenya igneous complex, northwestern Namibia, **3**, 335

MOLINA, E., GONZALVO, G. & KELLER, G.
The Eocene–Oligocene planktic foraminiferal transition: extinctions, impacts and hiatuses, **4**, 483

NOBLE, S. R., TUCKER, R. D. & PHARAOH, T. C.
Lower Palaeozoic and Precambrian igneous rocks from eastern England, and their bearing on late Ordovician closure of the Tornquist Sea: constraints from U–Pb and Nd isotopes, **6**, 835

PEREDA-SUBERBIOLA, J.
Hylaeosaurus, *Polacanthus*, and the systematics and stratigraphy of Wealden armoured dinosaurs, **6**, 767

PHARAOH, T. C., BREWER, T. S. & WEBB, P. C.
Subduction-related magmatism of late Ordovician age in eastern England, **5**, 647

PHARAOH, T. C., MOLYNEUX, S. G., MERRIMAN, R. J., LEE, M. K. & VERNIERS, J.
The Caledonides of the Anglo-Brabant Massif reviewed, **5**, 561

PRIETO, M., PUTNIS, A. & FERNANDEZ-DIAZ, L.
Crystallization of solid solutions from aqueous solutions in a porous medium: zoning in $(Ba,Sr)SO_4$, **3**, 289

REAVY, R. J., HUTTON, D. H. W. & FINCH, A. A.
The nodular granite of Castanheira, north central Portugal: origin of the nodules and evidence for diapiric mobilization of granite, **2**, 145

RIJKERS, R., DUIN, E., DUSAR, M. & LANGENAEKER, V.
Crustal structure of the London–Brabant Massif, southern North Sea, **5**, 569

RIPPERDAN, R. L., MAGARITZ, M. & KIRSCHVINK, J. L.
Carbon isotope and magnetic polarity evidence for non-depositional events within the Cambrian–Ordovician Boundary section near Dayangcha, Jilin Province, China, **4**, 443

ROLLINSON, H. R.
A terrane interpretation of the Archaean Limpopo Belt, **6**, 755

SEARL, A. & RANKIN, S.
A preliminary petrographic study of the Chilean nitrates, **3**, 319

SERVAIS, T., VANGUESTAINE, M. & HERBOSCH, A.
Review of the stratigraphy of the Ordovician in the Brabant Massif, Belgium, **5**, 699

SHA, J. & FÜRSICH, F. T.
Biostratigraphy of the Upper Jurassic–Lower Cretaceous bivalves *Buchia* and *Aucellina* of eastern Heilongjiang, northeast China, **4**, 533

SMITH, N. J. P. & RUSHTON, A. W. A.
Cambrian and Ordovician stratigraphy related to structure and seismic profiles in the western part of the English Midlands, **5**, 665

TEGNER, C. & WILSON, J. R.
A late ultramafic suite in the Kap Edvard Holm layered gabbro complex, East Greenland, **4**, 431

THORPE, R. S.
Geochemistry and eruptive environment of metavolcanic rocks from the Mona Complex of Anglesey, North Wales, U.K., **1**, 85

THORPE, R. S., GASKARTH, J. W. & HENNEY, P. J.
Composite Ordovician lamprophyre (spessartite) intrusions around the Midlands Microcraton in central Britain, **5**, 657

TIPPER, J. C.
Do seismic reflections necessarily have chronostratigraphic significance?, **1**, 47

TOURNEUR, F., VANGUESTAINE, M., BUTTLER, C., MAMET, B., MOURAVIEFF, N., POTY, E. & PRÉAT, A.
A preliminary study of Ashgill carbonate beds from the lower part of the Fosses Formation (Condroz, Belgium), **5**, 673

TURBEVILLE, B. N.
Sidewall differentiation in an alkalic magma chamber: evidence from syenite xenoliths in tuffs of the Latera caldera, Italy, **4**, 453

VERCOUTERE, C. & VAN DEN HAUTE, P.
Post-Palaeozoic cooling and uplift of the Brabant Massif as revealed by apatite fission track analysis, **5**, 639

WENDT, J.
Steep-sided carbonate mud mounds in the Middle Devonian of the eastern Anti-Atlas, Morocco, **1**, 69

WOODCOCK, N. H. & PHARAOH, T. C.
Silurian facies beneath East Anglia, **5**, 681

WRIGHT, A. E., FAIRCHILD, I. J., MOSELEY, F. & DOWNIE, C.
The Lower Cambrian Wrekin Quartzite and the age of its unconformity on the Ercall Granophyre, **2**, 257

RAPID COMMUNICATIONS

BOREHAM, S. & WEST, R. G.
Late Quaternary sediments with *Chara* encrustations in southern Fenland, **4**, 543

CASE, D. J.
Evidence for temperate soil development during the early Devensian in Gower, South Wales, **1**, 113

CRIMES, T. P. & UCHMAN, A.
A concentration of exceptionally well-preserved large tubular foraminifera in the Eocene Zumaya flysch, northern Spain, **6**, 851

HILLER, N.
A modern analogue for the Lower Ordovician *Obolus* conglomerate of Estonia, **2**, 265

NICHOLAS, C. J., HENWOOD, A. A. & SIMPSON, M.
A new discovery of early Cretaceous (Wealden) amber from the Isle of Wight, **6**, 847

SMITH, J. V., MIYAKE, Y. & YAMAUCHI, S.
Flow direction and groundmass shear zones in dykes, Shimane Peninsula, Japan, **1**, 117

DISCUSSIONS

BARBIN, V., RAMSEYER, K., DEBENAY, J. P., SCHEIN, E., ROUX, M. & DECROUEZ, D.
Discussion of cathodoluminescence of Recent biogenic carbonates: an environmental and ontogenetic fingerprint: Reply, **2**, 269

COOPER, A. H. & HUGHES, R. A.
Discussion on evidence for an unconformity at the base of the Eycott Volcanic Group: Comment, **2**, 271

FRIEDMAN, G. M.
Discussion of cathodoluminescence of Recent biogenic carbonates: an environmental and ontogenetic fingerprint: Comment, **2**, 269

MILLWARD, D. & MOLYNEUX, S. G.
Discussion on evidence for an unconformity at the base of the Eycott Volcanic Group: Reply, **2**, 272

SCHMITZ, B.
Discussion on an iridium anomaly in the Ludlow Bone Bed from the Upper Silurian, England: Reply, **6**, 855

SOPER, N. J.
Discussion on evidence for an unconformity at the base of the Eycott Volcanic Group: Comment, **2**, 271

SMITH, R. D. A. & AINSWORTH, R. B.
Discussion on an iridium anomaly in the Ludlow Bone Bed from the Upper Silurian, England: Comment, **6**, 855

PUBLICATIONS RECEIVED

Lists appear beginning pages **1**, 141; **2**, 287; **3**, 413; **4**, 559; **5**, 733; **6**, 863

NOTICES

Notices from the International Commission on Zoological Nomenclature occur on pages **1**, 143; **3**, 415; **5**, 736

ERRATUM

An erratum appears on page **6**, 865

REVIEWS

Advances in X-Ray Analysis, Volume 34, **1**, 140
An Agenda of Science for Environment and Development into the 21st Century, **3**, 397
Ages of Gaia, **4**, 546
Applied Mineralogical Thermodynamics. Selected Topics, **1**, 126
Atlas of Palaeogeography and Lithofacies, **3**, 409
Biogeochemistry. An Analysis of Global Change, **1**, 137
The Biology and Evolution of Fossil Plants, **4**, 547
Biomechanics in Evolution, **3**, 398
The BIRPS Atlas. Deep Seismic Reflection Profiles Around the British Isles, **3**, 391
Calcareous Algae and Stromatolites, **2**, 285
Caledonian Structures in Britain – South of the Midland Valley, **3**, 401
Classic Petroleum Provinces, **1**, 129
Climate Change 1992. The Supplementary Report to the IPCC Scientific Assessment, **3**, 396
Collins Photo Guide to Fossils, **3**, 400
The Colours of Opaque Minerals, **1**, 139
Constructional Morphology and Evolution, **2**, 280
Cretaceous Echinoids from North-eastern Brazil, **3**, 395
Deep Interior of the Earth, **2**, 285
The Dynamic Earth. An Introduction to Physical Geology, 2nd ed., **3**, 394
Dynamic Processes of Material Transport and Transformation in the Earth's Interior, **3**, 404
Earth Observation Remote Sensing. Survey of Missions and Sensors, **6**, 861
Electron Probe Quantitation, **1**, 140
Energy and Mineral Resource Systems: An Introduction, **3**, 411
Epithermal Gold in the Philippines: Island Arc Metallogenesis, Geothermal Systems and Geology, **1**, 128
Evolution of Palaeoecology and Palaeoenvironment of Permian and Triassic Fluvial Basins in Europe. Volume 1: Western and Eastern Europe; Volume 2: Southeastern Europe and Index, **5**, 732
Evolutionary Paleobiology of Behavior and Coevolution, **1**, 134
Exploration Britain. Geological Insights for the Next Decade, **6**, 860
Exposed Cross-Sections of the Continental Crust, **2**, 286
Extinction and Phylogeny, **4**, 545
Extinction. Bad Genes or Bad Luck?, **2**, 277
Facies Models. Response to Sea Level Change, **3**, 405
Finite Plastic Deformation of Crystalline Solids, **3**, 410
Fossil Horses. Systematics, Paleobiology, and Evolution of the Family Equidae, **6**, 857
Fossils in the Field. Information Potential and Analysis, **4**, 554
Fractals and Chaos in Geology and Geophysics, **4**, 555
From Shoreline to Abyss: Contributions in Marine Geology in Honor of Francis Parker Shepard, **3**, 407
Gemology, 2nd ed., **2**, 279
Geohazards. Natural and Man-Made, **4**, 557
Geology and Environment in Western Europe. A Coordinated Statement by the Western Eurpean Geological Surveys, **3**, 403
Geology and Hydrocarbon Habitat of the West Siberian Basin, **6**, 858
Geology and Scenery in Britain, **4**, 558
The Geology of Antarctica, **4**, 556
Geology of England and Wales, **2**, 281
Geology of Japan, **4**, 552

Geology of Japan, **4**, 552
Geophysical Theory, **3**, 396
Glacial Deposits in Great Britain and Ireland, **2**, 278
Global Biogeochemical Cycles, **3**, 408
Global Climate and Ecosystem Change, **1**, 123
The Global Paleomagnetic Database. Design, Installation and Use with ORACLE, **2**, 281
Global Perspectives on Ordovician Geology, **4**, 550
Gold. The Indian Scene, **3**, 410
Granitoid Rocks, **3**, 406
Heavy Minerals in Colour, **1**, 139
Hey's Mineral Index. Mineral Species, Varieties and Synonyms, 3rd ed., **4**, 551
Holmes' Principles of Physical Geology, 4th ed., **4**, 549
Hydrothermal Mineral Deposits. Principles and Fundamental Concepts for the Exploration Geologist, **3**, 409
Ice Age Earth. Late Quaternary Geology and Climate, **3**, 394
Ice Composition and Glacier Dynamics, **2**, 279
Igneous and Metamorphic Rocks Under the Microscope. Classification, Textures, Microstructures and Mineral Preferred Orientations, **4**, 555
International Global Network of Fiducial Stations. Scientific and Implementation Issues, **6**, 860
Introduction to Clay Minerals. Chemistry, Origins, Uses and Environmental Significance, **4**, 553
An Introduction to Geophysical Exploration, 2nd ed., **1**, 124
Introduction to Mineral Sciences, **2**, 275
Introduzione alla Geologia Strutturale, **1**, 125
Inverse Modeling in Exploration Geophysics, **2**, 285
Jurassic and Cretaceous Floras and Climates of the Earth, **2**, 283
Koobi Fora Research Project Volume 4. Hominid Cranial Remains, **3**, 395
Lakeland Rocks and Landscape. A Field Guide, **3**, 402
Larvae and Evolution. Toward a New Zoology, **4**, 557
Life as a Geological Force. Dynamics of the Earth, **4**, 546
Living Earth. A Short History of Life and its Home, **1**, 128
Magmatism and the Causes of Continental Break-up, **5**, 732
Magmatism in Extensional Structural Settings, **1**, 125
Marine Clastic Reservoirs. Examples and Analogues, **6**, 862
Marine Minerals in Exclusive Economic Zones, **3**, 410
Mid-Cretaceous Ostracoda of Northeastern Algeria, **1**, 133
Mineral Deposit Evaluation. A Practical Approach, **4**, 556
Mineral–Water Interface Geochemistry, **3**, 411
Miocene and Oligocene Petroleum Reservoirs of the Santa Maria and Santa Barbara–Ventura Basins, California, **1**, 129
Modern Methods of Igneous Petrology: Understanding Magmatic Processes, **1**, 132
Mountains of Fire. The Nature of Volcanoes, **1**, 133
The Nature of the Stratigraphical Record, 3rd ed., **6**, 857
New Views on an Old Planet. Continental Drift and the History of the Earth, **4**, 546
Numerical Adventures with Geochemical Cycles, **1**, 137
Optical Mineralogy. Principles & Practice, **4**, 549
Ordovician (Caradoc) Marginal Basin Volcanism in Snowdonia (North-West Wales), **1**, 137
Organic Matter. Productivity, Accumulation, and Preservation in Recent and Ancient Sediments, **6**, 861
Oxide Minerals: Petrologic and Magnetic Significance, **1**, 127

Palaeobiology. A Synthesis, **3**, 399
Paleoclimatology, **2**, 283
Paleomagnetism of the Atlantic, Tethys and Iapetus Oceans, **5**, 731
Periglacial Geomorphology, **4**, 547
Petrology of Lamproites, **1**, 135
Phanerozoic Sea-Level Changes, **4**, 548
Physical Chemistry of Magmas, **3**, 406
Pre-Mesozoic Geology of Iberia, **3**, 397
Preliminary Report on the Mineral Resources of Shetland and Results of a Pilot Geochemical Survey, **1**, 135
The Preparation of Thin Sections of Rocks, Minerals, and Ceramics, **3**, 404
Principles of Igneous and Metamorphic Petrology, **1**, 121
Principles, Methods, and Application of Particle Size Analysis, **3**, 400
Progress in Metamorphic and Magmatic Petrology. A Memorial Volume in Honour of D. S. Korzhinskiy, **1**, 131
The Proterozoic Biosphere. A Multidisciplinary Study, **3**, 391
Quaternary Sediments, **1**, 126
Regional Geology of Africa, **2**, 284
Remote Sensing of Forest Resources. Theory and Application, **1**, 136
Remote Sensing of the Earth from Space: Atmospheric Correction, **6**, 861
Reservoir Characterization II, **1**, 139
Saltmarshes. Morphodynamics, Conservation and Engineering Significance, **4**, 548
Scanning Electron Microscopy and X-Ray Microanalysis. A Text for Biologists, Materials Scientists, and Geologists, 2nd ed., **3**, 402
Scientists on Gaia, **6**, 858
Sedimentary Petrology, 2nd ed., **1**, 136
Sedimentary Petrology. An Introduction to the Origin of Sedimentary Rocks, 2nd ed., **3**, 398
Shear-sense Indicators: A Review, **3**, 394
The Stability of Minerals, **5**, 731
Stable Isotope Geochemistry: A Tribute to Samuel Epstein, **3**, 408
Structural Geology. Principles, Concepts, and Problems, **3**, 400
Taphonomy. Releasing the Data Locked in the Fossil Record, **1**, 138
Tectonic Evolution of the North Sea Rifts, **3**, 392
TERRA-1: Understanding the Terrestrial Environment. The Role of Earth Observations from Space, **3**, 404
Theoretical Geochemistry: Application of Quantum Mechanics in the Earth and Mineral Sciences, **6**, 859
Three-Dimensional Facies Architecture of Terrigenous Clastic Sediments and Its Implications for Hydrocarbon Discovery and Recovery, **3**, 403
Thrust Tectonics, **6**, 859
Tracking Dinosaurs. A New Look at an Ancient World, **2**, 282
Trilobites, **2**, 275
Understanding Catastrophe. Its Impact on Life on Earth, **6**, 857
Upper Cambrian Conodonts from Sweden, **2**, 276
Upwelling Systems: Evolution Since the Early Miocene, **4**, 551
Volcanologie, **2**, 276
The West African Orogens and Circum-Atlantic Correlatives, **1**, 121